

## HEALTH SERVICES RESEARCH AND DEVELOPMENT\*

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THE term "health services delivery system" connotes planning, resource development, organization, and financing—all interrelated by a formal policy. In the United States public policy now endorses one product of a health services delivery system, that is, equity of access. But we lack the means and even the knowledge of how to bring about the means. In some nations equitable access is reasonably assured by policy combined with formal organization. Both have usually emerged from preexisting social and political philosophies that affirm the responsibility of the state to make available essential human and social services. Our country has scarcely had five years' experience with a public policy that some nations adopted more than 100 years ago.

In the United States attempts to improve and extend health services for all the people have so far relied upon a historically unique admixture of vigorous but traditional categorical approaches and bold local innovations. In the latter we have tried to achieve competence in local planning and regionalization of health services and to improve health care for the poor rapidly. So far these efforts have been judged inadequate to the task of overcoming the effects on health services of our 200 years as a nation committed to individualism and pluralism. Collective responsibility for the collective health of our people is now well recognized as a legitimate policy position. But the historical evolution of medical care in the United States differs sharply from that in other countries which now have organized health services directed by formal national policy. This makes it impossible to import and apply directly their methods for providing equitable access, assuring stable

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connotes innovation in the arena of health services on a scale as yet untried in this country. The intent is to combine effectively public

distribution and coordination of services and, most significantly, budgeting to contain expenditures for health services while developing and allocating resources on a rational basis. As a nation we have not yet agreed upon the nature of the institution which will carry out the collective responsibility for health services.

Some would summarize our current dilemma in medical care by saying that our policy of assuring equal access cannot be implemented because of unyielding economic reality. The basis for this statement is the fact that although our nation now allocates 7% of its gross national product to medical care, the rate of progress toward achieving equal availability of needed health care has not matched the rate of inflation nor the rate of increase in expenditure. Given this situation, moderation of cost increases becomes the necessary condition for making any substantial progress toward "equity of access."

In the absence of a formal policy it is logical that the current national strategy embrace increased efficiency and productivity as its central elements. These in turn must be considered in the light of the "new federalism" which is dedicated to strengthening local governments and communities and to increasing their self-sufficiency in solving problems.

Within these guidelines the Health Services and Mental Health Administration, through the National Center for Health Services Research and Development, is establishing a small number of Experimental Health Services Planning and Delivery Systems. These are to be carefully selected laboratories for determining the extent to which we can achieve the benefits of system properties in health services while retaining our pluralistic approach. The rationale and the authority for such experiments is contained in Section 203 (2) (iv) of PL 91-515:

Projects for research, experiments, and demonstrations dealing with the effective combination or coordination of public, private, or combined public-private methods or systems for the delivery of health services at regional, State, or local levels.

The Experimental Systems have as their explicit purpose to discover or to develop and build upon effective combinations of private, public, and voluntary efforts within communities so that these may be more efficiently directed to the attainment of more equitable access, cost moderation, and maintenance of quality of care.

Some definitions of the key words are in order. *Experimental*

connotes innovation in the arena of health services on a scale as yet untried in this country. The intent is to combine effectively public and private efforts so as to obliterate successively the distinction between publicly and privately-paid-for medical care. Clearly there is no assurance of success. The word "experimental" also denotes application of scientific methods, experimental designs, and the collection of reliable and accurate data for assessing the results.

*Health services* in this program is restricted to personal health services. These are defined as services provided to individuals by doctors, dentists, and other professionals and assistants for preventive, curative, or rehabilitative purposes in the physical, emotional, and social domains of illness.

*Planning* denotes selecting innovations from among available alternatives and their deliberate application over a future period. In contrast to the wider responsibilities of the Comprehensive Health Planning agencies, planning here is restricted to personal health services. It is also an immediate logical prelude to decision making and is therefore the direct companion of a function of management.

*Delivery* signifies that the experimental system must bring about beneficial change in the actual type, volume, and distribution of care by individual and institutional providers. This change is to be brought about in accord with objectively defined requirements of the local population for health services.

*System* is used in a nontechnical sense to denote the creation and maintenance of functional relations among the providers of personal health services, the payers, and the public in such a way that needed services will be predictably available and provided in accord with specified standards.

In the experimental systems a community is defined as a natural trade area which may comprise an entire state, a large rural area, a city or, exceptionally, a segment of a large city. The geographically defined population must be sufficiently large and diverse to require the full spectrum of health services.

Full participation by existing Regional Medical Programs and comprehensive health planning agencies is essential. A particular purpose of the experimental system approach is to conjoin the funding now originating from separate categorical sources within the Health Services and Mental Health Administration; Health, Education, and

Welfare (HEW); the Office of Economic Opportunity; and other federal agencies. Categorical and noncategorical public and private funds will be brought together progressively to support the financing of the services and the voluntarily established local group that will oversee this entire enterprise.

The National Center will provide funds to support the research and development (R & D) necessary to design and establish the framework of experimental systems. These activities include identifying the unmet local requirements for health services, developing and installing the needed new resources and services to meet these requirements, and creating a health services data system by which to evaluate and manage the local enterprise.

The cardinal elements of the Experimental Health Service Planning and Delivery Systems are therefore a geographically defined population and trade area, up to an entire state in size; local planning and management by a voluntarily established corporate board exerting centralized authority; local responsibility to redirect federal, state, and local public funds along with private resources in accord with locally determined priorities; and, as a progressive consequence of this, streamlining and simplifying federal granting procedures for the support of health services.

It is obvious that even if communities capable of such a mature approach are able to mobilize and organize themselves in this fashion, they remain only potential vehicles for attaining on the local level what is not yet possible nationally: namely, bringing about systematic modification in the organization, delivery, and financing of health care so as to achieve equity. The National Center is addressing this problem through its program of R & D.

The National Center has primary responsibility within the Department of Health, Education, and Welfare for research and development aimed at producing working prototypes of improved health services delivery systems.

The Center's strategy for carrying out its R & D contains three main elements:

- 1) Development of prototype community health services systems which will improve access to health care, moderate costs, and assure an acceptable level of quality.
- 2) Development or improvement of the components comprising

health services which, when appropriately combined, form health services systems.

3) Support of studies which examine fundamental elements of health care organization and delivery in descriptive, analytic, and quantitative terms.

The Center has formulated the problems and the approaches through a continuing series of organized consultations with representatives of the public, national representatives of the health professions, health services institutions, the health insurance industry, and the sciences and disciplines most relevant to the improvement of health services. We have also had the benefit of counsel from youth groups. The Center maintains constant working liaison with other agencies of the Health Services and Mental Health Administration, with HEW and other federal establishments concerned with health services. By this means program areas, major projects, and other principal aspects of the program are defined, refined, and kept under continuous critical review and appraisal by federal officials and nonfederal consultants and advisers.

The plans which have evolved in this manner are the basis for the development and application of R & D, which is the process of developing, introducing, testing, and evaluating components of health services that meet specified performance criteria under realistic conditions. Through the process of R & D, directors, managers, and professional people select and adopt the successful ideas, processes, facilities, hardware, or manpower which are the product of R & D. R & D uses knowledge and prototype components which have been created at an earlier stage by research or other R & D.

In the framework of the Experimental Health Services Planning and Delivery Systems described above the Center is coordinating related efforts of other HSMHA and HEW programs in an historic concentrated multiagency approach to the pooling and common channeling of federal funds from many different sources.

The systems approach calls for the identification and examination of the interrelated components which comprise community health care, as well as the modification of these components in order to maximize their individual and joint contributions. The major components identified for special attention are new types of manpower, interinstitutional arrangements and ambulatory care centers, health services data systems,

quality assurance, cost-effective technology, and cost containment, including financing. Some of these major R & D components will be briefly described.

#### MANPOWER

At present the Center is supporting studies of mid-level medical workers, which include the MEDEX projects as well as demonstrations focussed upon the family-nurse practitioner, the pediatric nurse practitioner, school nurse practitioner, the nurse mid-wife, and the dental auxiliary. These manpower components are the essential means, in the short-run, of improving distribution of and access to health services. Appropriate manpower components will be incorporated experimentally into the ambulatory care programs and other elements of community health services systems.

With the assistance of distinguished panels of advisers, the Center has developed a national evaluation protocol. By using this protocol, all who are experimenting with "physician extenders" can obtain standardized and comparable information on such major questions as: 1) the range of tasks and functions which may be safely and ethically delegated; 2) the economic implications in medical practice of such delegation; 3) the effects on the activities of physicians and other workers in medical practices; 4) methods of assuring maintenance of effective care standards; 5) strengths and weaknesses from the perspective of physicians, patients, and the mid-level workers themselves; and 6) the impact of the program on the redistribution of services in areas of poor access.

#### AMBULATORY CARE PROGRAM

It has long been recognized that delivery systems require ambulatory centers designed, organized, and staffed to provide comprehensive health services for the large proportion of the population which needs only ambulatory care. Until recently, however, there has not been sufficient exploratory R & D by which to design and test the benefits of this promising but complex approach to meeting the major fraction of health services needs. The Center is now supporting the development and evaluation of the so-called Garfield model, named after the medical director of the Kaiser Permanente Medical Program. It incorporates within the ambulatory-care system health testing, health

care, care of the sick, and preventive maintenance. Increased use of physician's assistants and technological aids is intended to relieve the physician of unnecessary involvement while maintaining the desired level of quality.

#### INTERINSTITUTIONAL ARRANGEMENTS

The cost of medical care provided in hospitals and other health care institutions is rising at a more rapid rate than that of any other segment of the health care industry. The National Center is resting and implementing innovative approaches and methods for the moderation of these excessive expenditures for institutional care. Examples are the evaluation of all inclusive rates for reimbursement of hospitals and the evaluation of hospital mergers, shared clinical services, and joint ventures.

#### HEALTH SERVICES DATA SYSTEMS

The Center is in the process of developing health services data systems that will provide the essential information for managing, monitoring, and evaluating the Experimental Health Services Planning and Delivery Systems. Baseline data will be gathered in all communities to permit objective determination of the rates of progress toward the goals of improved availability, cost moderation, and improvement of quality. Comparable and uniform information will be gathered in experimental communities in order to compare the results obtained from the various innovative delivery models which are developed. Each community will provide comparable measures at specified time intervals to document progress and to describe how that progress was made in meeting the unmet health services requirements of the community. It is expected that each community will collect pertinent data from a variety of sources. The initial categories of health services data have been provisionally identified as demographic, hospital care, ambulatory care, financial, and quality assessment.

Each component of the data system will be developed serially, beginning with a survey of a sample of the population followed by development of uniform hospital discharge abstract data, financial analysis of sources, and methods of payment. Sampling of ambulatory care services and quality-assessment data will follow.

### EFFECTIVENESS OF CARE

The critical nature of medical care and the related large resource requirements, together with the need for careful monitoring of organizational and health care manpower demonstrations, require that the effectiveness of care be evaluated. In the absence of objective techniques for determining this it will be difficult to state, in other than economic terms, the benefits produced by changes in the organization and delivery of care. The Center is therefore giving priority to the development and testing of various methods for assessing the quality of care, methods which are valid, acceptable to providers, and which lend themselves to educational and administrative purposes.

We have under way a developmental program with the American Society of Internal Medicine for assessing the content of office practice in internal medicine and the extent to which it meets criteria established by peers. The American College of Physicians, in a parallel effort, is testing the application of criteria for performance for hospital care. Similar projects will be extended to other specialty organizations.

The Hawaii State Medical Association has completed a landmark study that makes it the first state society to evaluate the effectiveness of medical care being provided by its members throughout an entire state. Building on this and on experiences gained with medical-care foundations, the National Center is supporting a small number of Experimental Medical Care Review Organizations. Organized at local and state levels, these will develop methods for assessing objectively the content of office and hospital care and will provide operating experience in anticipation of legislation that will establish professional standards-review organizations.

Each of these components of health services systems and others that have not been mentioned are to be developed through R & D to the stage of exhibiting evaluated performance characteristics. Each is designed so as to permit its integration with, or installation independently of, all others. The ultimate test of the soundness of R & D is the actual effect of installing all of these within an Experimental Health Services System. The total effect should be greater than the sum of its parts in that maximum feasible progress should then occur in attaining equity while moderating cost inflation and providing assurance of quality.

The National Center cannot and does not advocate policy. Its responsibility extends to providing scientific evidence, developing an empirical characterization of health services, and creating through R & D pretested components that have a predictable performance. By involving the public, physicians and other providers, health care institutions, payers, and appropriate federal, state, and local political offices, all principals in health services are parties to the effort. If the work has been done properly, the demonstrable effects of each innovation should serve as the necessary stimulus to more widespread implementation.

As is evident from this description, the basic R & D strategy of the National Center proceeds on an operational definition of the health services delivery system. That is, the Center is guided by specifications of what the system should produce and how it should perform. The operational objectives are improved access in relation to health services requirements, cost containment, and assurance of quality. To the extent that they can objectively demonstrate such operational capability, the Experimental Health Services Systems will become the logical settings within which to achieve the intended benefits of universal financial entitlement when and by whatever mechanisms it is instituted.